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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,603	07/05/2001	John B. Elmer	00H011A	4067
24028	7590	08/09/2005	EXAMINER	
STERRETT, JONATHAN G				
ART UNIT		PAPER NUMBER		
		3623		

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/899,603	ELMER ET AL.
	Examiner	Art Unit
	Jonathan G. Sterrett	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 05 July 2001.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-13 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-13 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Summary*

1. **Claims 1-13** are pending in the application.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 1-13** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding **Claims 1-13**, the claims cite an “unlimited” number of product attributes. The computer memory referenced in the specification has a limited amount of storage space for storing the above referenced attributes. The invention is designed to obtain feedback from respondents on product attributes. While a number of up to 300 is listed in the specification, the specification also states that an upper limit is not intended. It is not clear from the specification how survey participants would complete a survey when there is an unlimited number of product attributes in the survey.

Because of the inability of limited storage memory to store an “unlimited” number of product attributes and the inability of respondents with obtaining feedback from an

“unlimited” number of product attributes, the invention is not enabled, because one of ordinary skill in the art would not know how to make or use the invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-13** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **Claims 1-13**, the limitation “**unlimited**” is indefinite in describing a number of attributes and/or levels of those attributes. Because “**unlimited**” includes both smaller numbers associated in the art with market surveys, e.g. 100 or 200 product attributes and larger numbers, e.g. a few thousand product attributes in the case of an extensive market survey or study; and also includes a few million or a billion or even a trillion product attributes (or more as would be covered by “**unlimited**”!), the claim is indefinite.

Regarding **Claim 1**, part “c)” is indefinite because it is not clear how the respondents are responding to the survey in such a way as to accomplish subparts “i)” and “ii)”. Is the elimination of attributes in part i accomplished by the respondent? Is the hierarchy from the attributes produced directly by the respondent in accomplishing the survey, i.e., are they constructing the hierarchy as a part of responding to the survey? Or does the applicant intend for the computerized method of the survey to be responsible for parts “i)” and “ii)” in adaptive response to the respondent’s answers?

Part "c)" of the claim is followed by two subparts in such a way that it is not clear how the subparts are accomplished by the respondent completing the survey, therefore the claim is indefinite.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Orme (hereinafter Orme A).**

**Orme A:** Orme, Bryan, K; King, W. Christopher; "Conducting Full-Profile Conjoint Analysis over the Internet", 1998, Sawtooth Software Research Paper Series, pp.1-13.

Regarding **Claim 1**, Orme A discloses:

**a) a user, inputting said substantially unlimited set of product attributes and/or product attribute levels to one of an application service provider (ASP), a web server providing service, or an internet server, via a data communication means;**

Page 3 paragraph 3 line 1-4, Use of Internet (i.e. use of internet server) to administer surveys – see also page 4 paragraph 5 line 1-2. Since the survey is

conducted over the internet, the respondent has a data communication means (e.g. the computer, internet appliance or PDA the respondent is using to access the internet).

Page 5 paragraph 1 line 4-6, a number of attributes are used in an online survey.

Page 7 paragraph 4, Table shows attribute levels of "Annual Fee", "Interest Rate" and "Credit Limit". It is inherent in Conjoint Analysis that attributes arranged in a hierarchy are used to determine which attributes (and combination of attributes) are most attractive to targeted customers.

**b) said ASP, a web server providing service, or an internet server, defining a questionnaire for use/input by a plurality of individual respondents;**

Page 7 paragraph 3 line 1-2 – internet survey (i.e. using an internet server) is defined for use by a plurality of respondents –see page 7 paragraph 6 line 1-2, in this case 280 respondents completed the survey.

**c) said plurality of individual respondents, each responding to said questionnaire:**

**i) eliminating those product attributes that would not be considered in said individual respondent's buying decision;**

Page 6 Figure 2 – "single concept" eliminates attributes that would not be considered in selecting a credit card.

**ii) from the product attributes that would be considered, producing a hierarchy of said product variables;**

Page 7 paragraph 4, survey responses produce a hierarchy of product variables – in this example the hierarchy is "Annual Fee", "Interest Rate" and "Credit

Limit" –see also page 11 for the tables outlining the hierarchy of "Brand", "Annual Fee", "Interest Rate" and "Credit Limit". Different conjoint analysis methods are disclosed by Orme: "Single Concept" where single concepts are ranked and pairwise "Full Profile" (FP), where different concepts are compared.

**d) said ASP, said web server providing service, or said internet server, upon receiving inputs from said plurality of individual respondents, providing said user with an estimate of the purchase likelihood of any combination of the substantially unlimited set of product attributes and/or product attribute levels to a potential consumer group represented by said individual respondents.**

Page 7 paragraph 1 line 1, online conjoint analysis (i.e. provided by an internet server) provides purchase likelihood ratings (i.e. estimates of purchase likelihood ratings). Conjoint analysis provides the person designing the study with the above likelihood of any combination of a set of product attributes (and associated hierarchy) to a potential consumer group (i.e. since conjoint analysis is a type of marketing study, it targets potential consumer groups represented by individual respondents).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orme (hereinafter Orme A) in view of Orme (hereinafter Orme B).**

**Orme A:** Orme, Bryan, K; King, W. Christopher; "Conducting Full-Profile Conjoint Analysis over the Internet", 1998, Sawtooth Software Research Paper Series, pp.1-13.

**Orme B:** Orme, Bryan, K; "Which Conjoint Method Should I Use?", 1996, Sawtooth Software Research Paper Series, pp.1-6.

Regarding **Claim 2**, Orme A teaches the following limitations above in Claim 1:

- a) said user designing an online questionnaire to test respondent's interest/desire for product attributes;**
  - i) listing product attributes;**
  - ii) listing product attribute levels;**
- b) said respondent receiving said questionnaire over a network;**
  - i) said respondent eliminating attributes that do not factor into a respondent's individual selection decision;**
- d) said respondent receiving said customized questionnaire over said network, said respondent answers questions on said questionnaire by use of an input device; said answers being transmitted via a network to said user;**
- e) said user receiving a plurality of completed customized questionnaires;**

Orme A also teaches:

- iii) said user determining size of a population of respondents to be**

**surveyed;**

Page 7 paragraph 6 line 1-2, the sample size was determined by the number of users clicking a link on the sawtooth software website. This sample size ended up being 280 respondents.

**iv) said user determining a duration of said respondent's interaction with said survey;**

Page 7 paragraph 6 line 1, the duration of a respondent's interaction with the survey is determined by how long the respondent took to complete the survey – the survey was completed by 280 respondents.

**f) said system analyzing said completed questionnaires; whereby said system enables said user to design one or more products based on the responses from a plurality of respondents, such that said product includes attributes that most match the answers indicating relative importance of said attributes to a group of respondents' likely buying behavior.**

Page 10 paragraph 1 line 1-2, the conjoint analysis provides attributes with "importances" that describe how much impact the attribute has on the purchase decision. The credit card study would enable a user to design a credit card (i.e. product) that matches the relative importance of attributes to the group of respondents' likely buying behaviour.

Orme A does not teach:

**c) said system responding to both a) and b) to deliver to said respondent a**

**customized questionnaire;**

Orme B teaches:

**c) said system responding to both a) and b) to deliver to said respondent a customized questionnaire;**

page 2 paragraph 2 line 1-2, Adaptive Conjoint Analysis that is computer-administered (i.e. over the internet) adapts itself to respondent's previous answers to deliver the respondent a customized questionnaire.

Orme A and B both teach the use of conjoint analysis in marketing studies, and therefore both Orme A and B are analogous art.

Orme B teaches that conjoint analysis provides reliable and useful results (page 1 paragraph 3 line 2) in obtaining respondent feedback for use in marketing.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Orme A, regarding conducting conjoint surveys and analysis over the internet, to include the step of using the adaptive conjoint analysis to customize internet surveys and using the information to design one or more products, because it would provide reliable and useful information to design a product based on consumer input.

Regarding **Claim 3**, Orme A teaches:

**wherein said plurality of respondents is a statistically significant number.**

Page 7 paragraph 6 line 1, 280 respondents is a statistically significant number.

Regarding **Claim 4**, Orme A teaches:

**wherein the level of significance is greater than one standard deviation**

**from the mean.**

Page 11 Table “Conjoint Utilities”, Attributes marked with an asterisk are statistically significant at the 99% level, which is greater than plus/minus one sigma.

Regarding **Claim 5**, Orme A teaches the following limitations in Claims 1 and 2 above:

**a) said producer or designer submitting a plurality of product attributes, into a data mechanism for a user to design a questionnaire;**

**b) said plurality of respondents retrieving said questionnaire;**

**c) said plurality of respondents, each deselecting attributes that do not enter into an individual respondent's decision to purchase said product; and**

Orme A also teaches:

**d) ranking the attributes not deselected by said respondent, said respondent communicating said ranking of said attributes to said producer.**

Page 6 Figure 2, attributes not deselected are ranked from "Definitely Would Not" to "Definitely Would".

**Claims 6-12** recite similar limitations as those recited in **Claims 1-5** above, and are therefore rejected under the same rationale.

Regarding **Claim 13**, Orme A teaches:

**wherein each of said user and said at least one respondent have a display means and an input means.**

Page 3 paragraph 3 line 1-4, online surveys provide a display means and an input means for the user to enter (i.e. administer see page 4 paragraph 5 line 1-2) the survey and for the respondent to respond to the survey.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Elmer, John B; "Travel the high-speed road to global market research", June 9, 1997, Marketing News, v31n12, pp.H11, Dialog 01429743 00-80730.

Elmer, John B; "Customer visits: Building a Better Market Focus", Jan 1999, Journal of Product Innovation Management, v16n1, pp.107-109, Dialog 01762428 04-13419.

Elmer, John B; "3-D Pricing Helps to Overcome Marketing Myopia", Aug 1991, Marketing News, v25n16, pp.6, Dialog 00562966 91-37320.

Lenk, Peter J; DeSarbo, Wayne S; Green, Paul E; Young, Martin R., "Hierarchical Bayes Conjoint Analysis: Recovery of Partworth Heterogeneity from Reduced Experiment Designs", Spring 1996, Marketing Science; 15, 2; ABI/INFORM Global, p.173.

Malhotra, Naresk K; Peterson, Mark; Kleiser, Susan Bardi; "Marketing Research: A state-of-the-art review and directions for the twenty-first century", Academy of Marketing Science, Vol 27, Iss 2, p.160, ProQuest ID 40089550.

Pinnell, Jon, "Multistate Conjoint Methods to Measure Price Sensitivity", June 1994, Sawtooth Software Research Paper Series, pp.1-19.

Huber, Joel, "What we have learned from 20 years of Conjoint Research: When to Use Self-Explicated, Graded Pairs, Full Profiles or Choice Experiments", 1997, Sawtooth Software Research Paper Series, pp.1-15.

Orme, Brian K; "Predicting Actual Sales with CBC: How Capturing Heterogeneity Improves Results", 1999, Sawtooth Software Research Paper Series, pp.1-18.

US 5,732,200 by Becker discloses a system of using groupware to facilitate a QFD session. QFD provides for grouping and hierarchy of customer requirements, identifying tradeoffs between desired product attributes and engineering constraints.

US 5,227,874 by Kohorn discloses a method for using demographic information obtained in surveys to design product offerings for customers.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*JK*

JGS 8-5-2005

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